

Notice of Allowability

Application No.

10/098,626

Examiner

Kathleen M Kerr

Applicant(s)

FARWICK ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/18/05.
2. ☒ The allowed claim(s) is/are 3,5-8,15,16,20 and 21.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

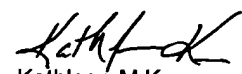
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Kathleen M Kerr
Primary Examiner
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DETAILED ACTION

Application Status

1. In response to the previous Office action, a Final rejection (mailed on October 28, 2004), Applicants filed an after-final response and amendment received on January 18, 2004. Said amendment has been entered. Said amendment cancelled Claims 1, 2, and 17-19 and amended Claims 3, 15, 16, and 20. Thus, Claims 3, 5-8, 15, 16, 20, and 21 are pending in the instant Office action and will be examined herein.

Priority

2. As previously noted, the instant application is granted the benefit of priority for the foreign application 10112992.0 filed in Germany on March 17, 2001.

Withdrawn - Claim Objections

3. Previous objection to Claim 15 for using an incorrect genus/species name is withdrawn by virtue of Applicant's amendment.

4. Previous objection to Claim 17 for depending from rejected claims is withdrawn by virtue of Applicant's cancellation of said claim.

Withdrawn - Claim Rejections - 35 U.S.C. § 112, second paragraph

5. Previous rejection of Claims 3, 5-8, 15-16, 20, and 21 under 35 U.S.C. § 112, second paragraph, as being indefinite for the use of any coryneform bacteria wherein particular C.

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glutamicum genes are required to be eliminated is withdrawn by virtue of Applicant's amendment to Claim 3.

6. Previous rejection of Claim 15 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrase "**the** Coryneform *glutamicum* gene that encodes a protein that exports lysine" (emphasis added) is withdrawn. Applicant's amendment deleted the term but altered the scope of the claim by removing it. The Examiner's amendment below, authorized by Applicant's representative as noted below, amends the phrase to ---the *Corynebacterium glutamicum* lysE gene that encodes the lysine-export protein--- as indicated on page 12 of the specification as a single, specific gene (see noted reference on page 12).

Withdrawn - Claim Rejections - 35 U.S.C. § 112, first paragraph

7. Previous rejection of Claim 15 under 35 U.S.C. § 112, first paragraph, written description, is withdrawn by virtue of the Examiner's amendment.

EXAMINER'S AMENDMENT

8. An extension of time under 37 C.F.R. § 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on **February 9, 2005**, **Brett Nelson** requested an extension of time for 1 MONTH(S) and authorized the Director to charge Deposit Account No. **02-4300** the required fee of \$110.00 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as

provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Amendments to the Claims

9. The claims have been amended as follows:

a) Rewrite Claims 15-16 as follows:

---15. The method according to claim 3, wherein the bacteria being fermented further comprise one or more overexpressed genes selected from the group consisting of:

- a) the *Corynebacterium glutamicum* lysC gene that encodes feedback-resistant aspartate kinase,
- b) the *Corynebacterium glutamicum* dapA gene that encodes dihydrodipicolinate synthase,
- c) the *Corynebacterium glutamicum* gap gene that encodes glyceraldehyde-3-phosphate dehydrogenase,
- d) the *Corynebacterium glutamicum* pyc gene that encodes pyruvate carboxylase,
- e) the *Corynebacterium glutamicum* mqo gene that malate:quinone oxidoreductase,
- f) the *Corynebacterium glutamicum* zwf gene that encodes glucose-6-phosphate dehydrogenase,
- g) the *Corynebacterium glutamicum* lysE gene that encodes lysine-export protein,
- h) the *Corynebacterium glutamicum* zwf1 gene that encodes zwf1 protein,
- i) the *Corynebacterium glutamicum* tpi gene that encodes triosephosphate isomerase, and
- j) the *Corynebacterium glutamicum* pgk gene that encodes 3-phosphoglycerate kinase.

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16. The method according to claim 3, wherein the *Corynebacterium glutamicum* bacteria being fermented further have expression of one or more genes, endogenous to said bacteria, being eliminated, wherein the one or more genes is/are selected from the group consisting of:

- a) the *Corynebacterium glutamicum* pck gene that encodes phosphoenolpyruvate carboxykinase,
- b) the *Corynebacterium glutamicum* pgi gene that encodes glucose-6-phosphate isomerase,
- c) the *Corynebacterium glutamicum* poxB gene that encodes pyruvate oxidase,
- d) the *Corynebacterium glutamicum* fda gene that encodes fructose bisphosphate aldolase, and
- e) the *Corynebacterium glutamicum* zwa2 gene that encodes zwa2 protein.---

Examiner's Comments

10. The amendments to Claims 15 and 16 are clearly supported as exact genes disclosed in the specification on pages 12-13, with clear references.

Conclusion

11. Claims 3, 5-8, 15, 16, 20, and 21 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M Kerr whose telephone number is (571) 272-0931. The examiner can normally be reached on Monday through Friday, from 9:00am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kathleen M Kerr
Primary Examiner
Art Unit 1652

February 9, 2005